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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,327	03/29/2001	Toru Sasaki	PW 0245676 H7432US	2287

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EXAMINER

KOVALICK, VINCENT E

ART UNIT

PAPER NUMBER

2673

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,327

Applicant(s)

SASAKI, TORU

Examiner

Vincent E Kovalick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 and 5 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. This Office Action is in response to Applicant's Patent Application, Serial No. 09/821,327, with a File Date of 3/29/01.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto (USP 5,473,348) taken with Matsumoto (USP 5,929,839) in view of Tanaka et al. (6,320,778).

Relative to claim 1, Fujimoto **teaches** apparatus and method of controlling paging unit of coprocessor built in display control system (col. 2, lines 66-67; col. 3, lines 1-67; col. 4, lines 1-21 and col. 11, lines 12-19); Fujimoto further **teaches** a display control apparatus comprising: a video memory for storing color data, which are use to designate colors for displayed dots, palette data for use in conversion of the color data and address data representing addresses of the color data and the palette data (col. 7, lines 24-30). It being obvious to a person of ordinary skill in the art at the time of the invention that the address data would have to be associated with the

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color data and palette date in a video memory, in order to be able to address said data for processing. Still further, Fujimoto **teaches** a first video memory controller for reading the palette data from the video memory in accordance with the address data, so that read palette data are written to a color palette memory (col. 7, line 24-30); in addition, Fujimoto **teaches** second video memory controller (the display control system, col. 5, lines 25) for reading the color data from the video memory in accordance with the address data, so that read color data are subjected to conversion on the color palette memory in accordance with the palette date (col. 7, lines 24-41).

Fujimoto **does not teach** an output circuit for outputting either the color data read from the video memory or converted color data output from the color palette memory to a display, wherein if present address data designating present palette data match with previous address data designating previous palette data, the first video memory controller does not write the present palette data to the color palette memory.

Matsumoto **teaches** an image display control apparatus (col. 1, lines 31-67; col. 2, lines 1-67 and col. 3, lines 1-28); Matsumoto further **teaches** an output circuit for outputting either the color data read from the video memory or converted color data output from the color palette memory to a display (col. 7, lines 26-40).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device as taught by Fujimoto the feature as taught by Matsumoto in order to

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implement in the system the means for establishing a circuit to convey the color data to the display device.

Fujimoto taken with Matsumoto **does not teach** the display control apparatus wherein if present address data designating present palette data match with previous address data designating previous palette data, the first video memory controller does not write the present palette data to the color palette memory.

Tanaka et al. **teaches** a memory device with a built-in-cache in which data can be stored for quick recall (col. 1, lines 63-67 and col. 2, lines 1-33). Tanaka et al. further **teaches** if present address data designating present palette data match with previous address data designating previous palette data, the first video memory controller does not write the present palette data to the color palette memory (col. 18, lines 9-10).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the device as taught by Fujimoto taken with Matsumoto the feature as taught by Tanaka et al. in order to include in the display control system the means to do and address compare in order to avoid writing the present palette data to the color palette memory which in turn saves the time and energy that would be expended to do the write operation.

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Allowable Subject Matter

4. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claim 2, the prior art of record (USP 5,473,348, Fujimoto, USP 5,929,839, Matsumoto and USP 6,320,778, Tanaka et al.) **does not teach** a display control apparatus wherein at completion of writing the previous palette data to the color palette memory, the first video memory controller retains the previous address data designating the previous palette data in a register, so that the first video memory controller determines whether to replace content of the color palette memory by comparison between the present address data and the previous address data.

Regarding claim 3, the said prior art **does not teach** a display control apparatus wherein the video memory stores a color palette replacer instruction, so that if the color pallet replacer instruction designate the color palette replacement, the first video memory controller proceeds to replacement of the content of the color palette memory unconditionally regardless of the address data.

5. Claims 4-5 are allowed.

6. The following is an examiner's statement of reasons for allowance:

Relative to claim 4, the major difference between the teaching of the said prior art of record and the instant invention is that said prior art **does not teach** a display control apparatus wherein a

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color palette replace signal generator for generating a color palette replacer signal based on the header data so as to make a determination whether to replace content of the color palette with respect to each of the planes, wherein if the color palette replacer instruction designates color palette replacement, the video memory controller unconditionally replaces previous palette data with present palette data on the color palette memory, while if the color palette replacer instruction does not designate color palette replacement, the video memory controller replaces the previous palette data with the present pallet data on the color palette memory only when a present color palette pointer designating the present palette data differs from a previous color-pallet pointer designating the previous palette data.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No.	5,559,952	Fujimoto
U. S. Patent No.	5,500,654	Fujimoto
U. S. Patent No.	5,400,334	Hayssen

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Responses

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Vincent E. Kovalick** whose telephone number is **(703) 306-3020**. The examiner can normally be reached Monday-Thursday from 9:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Bipin Shalwala**, can be reached at **(703) 305-4938**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Inquires

9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is **(703) 306-0377**.


Vincent E. Kovalick